

**Providing Leadership in Environmental Entomology**

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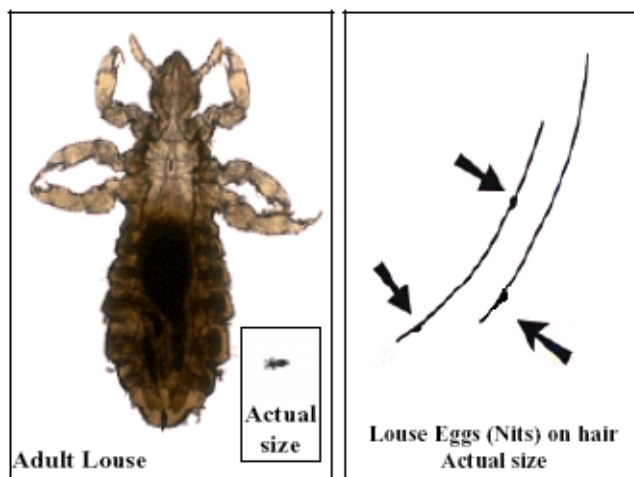
## HEAD LICE

Three kinds of lice can infest humans - head lice, body lice and crab (or pubic) lice. The head louse is closely related to the body louse, but their behavior is quite different. Experts disagree on whether or not these two insects are different species. They look nearly identical. However, the head louse stays on a person for its entire life, while the body louse lives in the seams of clothing and is only found on a person when feeding. The body louse is very rare, occurring in unsanitary, crowded conditions, where people wear the same clothing for many days. Crab (or pubic) lice are usually transferred from one individual to another through intimate contact, but occasionally can be transferred in other ways.

Head lice, *Pediculus capitis* DeGeer, are the most common louse problem in the United States. They are easily spread by physical contact and infestations can occur under the best sanitary conditions. Every year, 6-10 million people in the United States have head lice with 3/4 of them being school children less than 12 years old. Girls typically have higher rates of infestation than boys. However, having shorter hair does not prevent or eliminate infestations. Income level is not a factor in infestation. If one family member is infested with head lice, the risk of infestation for the rest of the family is greater. Usually Caucasians have more problems with head lice due to the shape of the individual hair shaft.

**Description.** Head lice are reddish-brown and wingless. Adults do not fly or jump from one person to another. Adult female head lice measure 1/8 inch, while the adult male measures 1/10 inch in length. Female head lice lay 50-150 eggs. The eggs are called nits and are the source of the phrase "nit picking." Nits are shiny white and are about half the size of a pinhead. They are glued individually to hair shafts close to the scalp, and hatch after 5 to 10 days into small nymphs or immatures. Head lice nymphs have three molts in which they gradually change into adults in about three weeks. Temperature and humidity during the incubation period can greatly affect development

time and survival. Temperatures between 75-98.6°F are optimum for head lice. Head lice cannot live away from a host for more than 48 hours.



When infestations are low, head lice are usually found in the hair above the ears and on the back of the scalp. With higher populations, they may be found on other parts of the head including the entire scalp and eye lashes. Head lice infestations typically result in an itching sensation at the back of the scalp. In children, this itching sensation is often most noticeable at night and associated with loss of sleep. The scratching can result in a secondary infection that may be more uncomfortable than the insect bites themselves. As a result, antibiotic therapy prescribed by a physician may be an important part of a head lice treatment program. In extreme cases, the infested person may experience fatigue, chills, leg cramps, and a rash away from the site of the lice feeding. If this happens, seek medical attention.

**Non-chemical Prevention and Control.** To prevent infestations, children should never share hats, combs, hair brushes, or similar items. All clothing, bedding, and towels used by the infested person should be washed in hot, soapy water to kill lice. Non-infested family members should not share towels, combs, hair brushes, and similar items with an infested person. Notify your child's school, camp, child care provider or others who may come into close contact with him or

her. Many schools have a "No Nit Policy" requiring children to be nit-free before returning to school. It may be possible to eliminate an infestation of head lice by daily hair washing and nit removal without the use of insecticidal shampoos. Nit combs are available from your pharmacy.

**Chemical Control and Removal.** Insecticidal shampoos are available from your local pharmacy. Some products require a physician's prescription, but others are available without one. Over-the-counter products usually contain either natural pyrethrum or permethrin. Two shampoo treatments are usually required; one to control the adults and immatures already present, and another treatment approximately ten days later to control newly emerged nymphs. It is essential to follow the label instructions carefully since you will be applying an insecticide directly to your skin. After washing hair, a special nit-removal comb should be used to help remove eggs and dead adults from the hair.

Non-infested family members and others who have close contact with the infested person should be closely monitored for head lice infestations. However, they should not receive preventative treatments of insecticidal shampoo.

Do not spray homes with insecticide since head lice do not survive away from a host for very long. Vacuuming carpet, mattresses, upholstery, and areas used by the infested person can be very effective in limiting the problem.

### **Tips from the NPA**

The National Pediculosis Association is a non-profit organization dedicated to health education.

- Watch for signs of head lice.
- Check all family members.
- Only treat those who are infested.
- Manual removal of all nits is the best option whenever possible.
- Consult your physician or pharmacist before applying insecticidal shampoos when the person is pregnant, nursing, asthmatic, or has other medical conditions.
- Wash bedding, recently worn clothing, combs and brushes in hot water.
- Vacuum to remove lice or fallen hair with attached nits from upholstered furniture, rugs, stuffed animals and car seats.
- Notify your child's school, camp, child care provide, neighborhood parents, and others who may be affected.
- Honor the "No Nits Policy".

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